

**Before the
Federal Communications Commission**

In the Matter of)	
)	WC Docket No. 13-39
Rural Call Completion)	

**Reply Comments of HD Tandem
In Response to the
THIRD FURTHER NOTICE OF PROPOSED RULEMAKING**

In these Reply Comments, HD Tandem argues that the Federal Communications Commission ("Commission" or "FCC") should implement its rural call completion rules with an eye toward ensuring that the rules adopt equitable obligations across the ecosystem to ensure proper enforcement and in all instances, support the Internet Protocol ("IP") Transition and a new IP framework. As noted previously, HD Tandem agrees with the widespread recognition that the legacy Time Division Multiplexing ("TDM") based regulations are obsolete and the existing geographically-based public switched telephone network ("PSTN") serves as an obstacle to the IP Transition. Any rural call completion rules should preserve the incentives of carriers and consumers to reap the full benefits of an all-IP network. The rules adopted in this proceeding hold out the promise that entities currently investing in sophisticated fraud detection and deterrence systems could repurpose those investments in favor of innovating and investing in network elements that support the IP Transition.

HD Tandem is one of the largest intermediate providers to rural areas because of its focus on price relief and technological advancement on routes to the highest volume rural destinations. HD Tandem is asking the FCC to apply these rules to HD Tandem and the rest of the intermediate providers. HD Tandem supports transparency mechanisms that will enable regulatory authorities to root out illegal cost shifting or other routing behaviors that impair high-quality call completion to rural as well as urban areas.

I. The FCC should institute an easy and efficient way of tracing a “call lineage” to the offending carrier

The record suggests that most parties in this proceeding are in favor of requiring intermediate carriers to register with state commissions or the FCC, however there are differences in opinion of who ultimately should be responsible for call completion issues. There is acknowledgment in the record of

nefarious actors acting as intermediate carriers.¹ The Commission should proceed on the assumption that there is no perfect rural call completion rule and that these nefarious actors will exploit any loopholes to continue existing business practices that earn profits for these carriers. Some carriers seem to believe that the intermediate carrier causing the call completion issue should be held responsible and the covered carrier absolved, so long as the covered carrier handed the call off to a registered intermediate carrier. HD Tandem believes it is necessary for both the covered carrier and intermediate carriers to be accountable and bear responsibility as both are complicit in the call path and the choices made to terminate a call. Accordingly, the FCC must have an efficient way to monitor and trace habitual call completion issues to both offending covered carriers and the downstream intermediate carriers alike. Furthermore, the FCC should require an appropriate reporting system or otherwise so that it can exercise insight at an aggregated level of which intermediate carriers are causing completion issues for which covered carriers. This will be critical to efficiently identify patterns of behavior and allow strict enforcement along with sufficient penalties to root out nefarious carriers.²

HD Tandem supports requiring additional information to improve oversight and reduce gaming of the system by nefarious actors. HD Tandem agrees with Comcast that “both originating [covered carriers] and intermediate providers should (1) maintain a list of the service providers with which they have a direct contractual relationship to complete calls; and (2) verify that providers are registered.”³ This information along with the information the FCC has already suggested, combined with requiring registered carriers to designate a primary point of contact and person responsible for resolving call completion issues, should be publicly available to facilitate dispute resolution.

As with any regime designed to address the incentives of bad actors, it is precisely these non-compliant entities that will challenge the regime the most. Since some covered carriers and intermediate carriers are complicit in the fraudulent routing decisions that cause call completion issues, it is unlikely these carriers will resolve issues with the urgency that the FCC and consumer desires. As such, the FCC is likely to receive numerous individual escalations warranting attention with little ability to identify systemic issues. ATIS comments that “one of the benefits associated with intermediate carrier registration is that it will help with traceback efforts should call termination issues arise.”⁴ HD Tandem therefore supports those commenters who propose a transparent, systematic methodology for the FCC to monitor the opening and resolution of call completion issues.

A straightforward solution would include a registration portal, where all the registration information is captured, to report, communicate and resolve call completion issues. Carriers or the Commission can then research the call at issue and assign the completion resolution to the downstream registered intermediate carrier. The Commission should also considering requiring covered entities to deliver CDRs or other call-completion information to facilitate resolution and validation by the original carrier. As part of a closed system like this, carriers could only assign the issue to a registered intermediate provider who they have previously listed as having a direct contractual relationship with the covered entity, ensuring compliance with the rules. In this way, the FCC could avoid micromanaging the specifics of individualized call completion transactions; but this system would provide an increased

¹ See USTelecom Comments at 4, Verizon Comments at 5, and Inteliquent Comments at 5.

² See e.g. “What is the financial incentive that is THE Problem; Simple Math: FCC Fines < Access Charges.” Verizon Report.

³ See Comcast Communications Comments at 2.

⁴ See ATIS Comments at 3.

level of visibility and transparency to the FCC, which should work to deter bad actors and facilitate further investigation by the FCC as systemic issues arise.

Requiring covered entities to have some knowledge of their part in call flows is essential to an equitable result in this docket. Inteliquent has argued that “covered providers should not be required to know all carriers in the call path. Instead, a covered provider should be required to know that the next intermediate provider in the call path is a registered provider. That provider, in turn, should then be required to know that the next intermediate provider in line is also a registered provider.”⁵ Furthermore, Inteliquent argues that the FCC should limit the number of intermediate providers to 3, but then states that it “can be difficult to know with certainty what happens down the call path when handing the traffic on to the next intermediate provider.” Arbitrarily limiting connections to three hops is not a supportable position if, as Inteliquent itself argues, carriers cannot know what happens to a call after it hands it off. HD Tandem agrees that any rule requiring or mandating a certain inflexible number of hops would prove unworkable. It is in covered carriers’ interests to reduce hops, as increased hops equate to increased costs, and excessive hops should be seen as a red flag for cost shifting or other bad behavior. To address this issue, and to create a proper call lineage, the FCC should institute a system that can track these multiple interactions on any given call path and identify patterns of behavior. Without this, carriers will continue to hide behind confidentiality provisions with downstream providers and issues will persist. Any disclosure obligations connected to a centralized monitoring should also correlate the burden to the offending covered carriers and intermediate carriers. If the agency can discern certain routes or carriers without any significant call completion issues it should not burden these entities with disclosure or other obligations.

II. The FCC shouldn’t limit this to “rural areas” and all intermediate carriers that participate in a call flow should be registered and maintain compliance

HD Tandem begins its discussion of this issue with the recognition that call completion issues are not limited to just the rural areas. They may be more concentrated in these areas due to the higher cost of access making cost shifting activities more profitable, but nefarious actors behavior will occur wherever carriers find it to be profitable which can occur anywhere in the United States. In fact, HD Tandem has identified these actors attempting bypass schemes in metro areas as well. If the FCC successfully implements processes that removes these actors’ behavior in rural areas, they will just move the concentration of offending behavior to the less controlled space. As such, the FCC should consider applying its rules and processes, or at least a subset of them, to all covered and intermediate carriers. Carriers need to be held accountable for completing calls, especially as retail pricing plans are mostly unlimited and carrier incentives are to reduce calls to all destinations.

The RCC Act is clear about non-discriminatory call completion and what the FCC must do:

(A) ensure the integrity of the transmission of covered voice communications to all customers in the United States; and

(B) prevent unjust or unreasonable discrimination among areas of the United States in the delivery of covered voice communications.

⁵ See Inteliquent Comments at 6.

AT&T and Inteliquent also have questioned whether access stimulation traffic should be subject to the rural call completion rules at all.⁶ The Commission must avoid any result which attempts to prevent some types of calls from experiencing identified completion problems, but leaves another group of calls vulnerable. Every call on the PSTN is equally entitled to completion. A contrary result would be flatly inconsistent with the RCCA(A). HD Tandem encourages the FCC to make clear that carriers should not discriminate between call types or destinations when it comes to call routing.

HD Tandem is experiencing the same types of problems as the other rural carriers, but suggests that many of the bad actors *focus* their fraudulent activities on locations with high volume hoping that these volumes obscure otherwise questionable call flows.

HD Tandem can track how prevalent these schemes are. In May 2018, for example, 63% of trouble tickets reported to HD Tandem by its LECs were traced to upstream cost shifting schemes by covered carriers and their chosen intermediate carriers, which wasn't HD Tandem. The tickets attributed to cost shifting were created by carriers that used re-origination to shift costs to another carrier, manipulated ANI (Automatic Number Identification), and ultimately created a quality issue that distorted the user experience to the point of that user making a complaint which resulted in the aforementioned trouble tickets. Well over half of all trouble tickets reported to HD Tandem are created by cost shifting schemes perpetrated intentionally and knowingly by nefarious covered providers and intermediate carriers that operate completely in the open absent regulation to make their presence known in the call path, which places an undue burden on HD Tandem.

HD Tandem has become proficient at discovering manipulated ANI and then tracing the call back to the victim of a PBX hacking, the most egregious form of cost shifting using computer intrusion and identity theft as a means of shifting the cost of the call on to an unsuspecting PBX as if it were a regulated telecom provider. There are multiple victims of this crime -- the consumer making the call, the PBX owner who gets billed for the call completion, and the receiving end user who may be an individual, a business, a hospital, or the police department.

Some carriers don't take their call completion obligations seriously and focus instead on cost shifting activities, traffic stifling, or other discriminatory practices on the high-volume locations HD Tandem serves. Fraud filters that identify and block fraudulent calls have steadily increased in volume. HD Tandem has found that despite increased investments in fraud detection and deterrence, the carriers have only become more aggressive and creative in their cost shifting tactics. This fraud network protection has become critical to the HD Tandem network and partner LECs (and their customers) it serves. It is our hope that once the FCC acts in this docket, HD Tandem can repurpose its investments in fraud detection and deterrence and toward innovation in network elements that support the IP transition. In the meantime, HD Tandem stands ready to act as a resource for the agency as it seeks to understand the complicated call completion and cost-shifting schemes currently operating in the industry.

⁶ See Comments of Inteliquent at 7. See AT&T April 10, 2018, ex parte re: *Rural Call Completion*, WC Docket No. 13-39.

III. The FCC should implement these rules quickly as this is an acute problem that has plagued the industry far too long

HD Tandem believes that the FCC should implement and begin enforcing its registration requirements within 90 days of approval of these rules, subject to OMB approval. Doing so should not present untenable problems for the covered carriers or intermediate carriers already diligent in completing calls. Other parties, including ATIS argue that “a much longer (i.e., three year) deadline would be more appropriate. This would allow existing retail contracts, which generally are entered into on three year terms, to finish their terms prior to being re-negotiated and updated.”⁷ Relatedly, the Commission has asked what the consequences should be in the event that a covered provider uses an unregistered intermediate provider.⁸

First, we question this approach and find it curious as to why a carrier would want to remain in an agreement with completion issues or with a provider that is unwilling to register. Secondly, this comment implies that the FCC guidelines will have an impact on termination rates and reflects the belief that carriers have priced contracts using below market rates. Such an assumption is not rational and delaying enforcement would only reward bad behavior if an extended implementation timeline would serve to merely reward this type of behavior. Similarly, the NTCA argues that providers should require 6 months to remove a provider who loses its registration.⁹ Again, if the FCC revokes a carrier’s registration, which one would assume is for a valid reason, why would any carrier want to continue to use them unless it is complicit in the routing scheme? A more straightforward approach is one that holds that if an intermediate carrier has its license revoked, it should no longer be able to route traffic.

IV. Carriers found engaging in re-origination schemes should have their authorizations revoked.

As HD Tandem discussed in its original comments and raised above, re-origination, SIM bypass and other cost shifting schemes should be swiftly dealt with. Depending on the scheme, the carrier should have its license revoked and if appropriate and consistent with statute, face criminal charges. Cost shifting is a large issue facing the industry, and is not limited to rural areas. The reason this issue is so rampant is that 1) it is difficult to identify and 2) penalties are rarely enforced. As discussed earlier, the primary way to identify the offending carriers in these schemes is transparency - a registry that quickly traces a call lineage, which HD Tandem believes will require an centralized system where carriers communicate to identify the root cause of call completion issues. As such, covered carriers and their downstream providers will quickly be able to identify where issues are happening, and take corrective action where needed and the FCC will be able to view habitual patterns across carriers in the ecosystem.

V. Conclusion

The weight of the record demonstrates that the Federal Communications Commission should implement its rural call completion rules with an eye toward ensuring that the rules adopt equitable obligations across the ecosystem to ensure proper enforcement and in all instances, support the Internet Protocol ("IP") Transition and a new IP framework. As noted previously, HD Tandem agrees with the widespread recognition that the legacy Time Division Multiplexing ("TDM") based regulations

⁷ See ATIS Comments at 3.

⁸ 3rd FNPRM at para. 84

⁹ See NTCA Comments at 6.

are obsolete and the existing geographically-based public switched telephone network ("PSTN") serves as an obstacle to the IP Transition. The rural call completion rules should preserve the incentives of carriers and consumers to reap the full benefits of an all-IP network. The rules adopted in this proceeding hold out the promise that entities currently investing in and sophisticated fraud detection and deterrence systems could repurpose those investments in favor of innovating and investing in network elements that support the IP Transition. Specifically, HD Tandem supports transparency mechanisms - an effective registry of covered and intermediate carriers - that will enable regulatory authorities to root out illegal cost shifting or other routing behavior that impairs high-quality call completion to rural as well as urban areas.

Respectfully submitted,

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